WHAT IS CLAIMED IS:

1. An audio-video signal processing system having a partitioned software architecture, the system comprising:

a processor; and

a processor readable medium coupled to the processor, the processor readable medium having signal processing code to process an input signal, the signal processing code comprising:

application specific code comprising a plurality of application specific modules, wherein each application specific module includes code to cause the processor to perform at least one application specific operation; and

common processing code comprising a plurality of common processing modules, wherein each common processing module includes code to cause the processor to perform at least one common processing operation and each common processing module is compatible with a plurality of application specific modules.

2. The system of claim 1 wherein the processor is a digital signal processor and the processor readable medium is system memory, the system further comprising:

application specific module (ASM) managers stored in the system memory wherein each ASM manager includes data fields specifying attributes and operational codes; and

common processing module (CPM) managers stored in the system memory wherein each CPM manager includes data fields specifying attributes and operational codes; and

a second processor for processing input data received by the system and having write access to the ASM and CPM managers to correlate information contained by the data fields of the ASM and CPM managers with information;

wherein the digital signal processor has read access to the ASM and CPM managers and can detect changes to the ASM and CPM managers.

3. The system of claim 2 wherein the second processor is a reduced instruction set computer (RISC) processor to process system configuration input data and to control messaging of input configuration data to the digital signal processor.

4. The system of claim 2 further comprising:

a copy of the ASM and CPM managers locally accessible to the digital signal processor to prevent read/write data conflicts.

5. The system of claim 1 wherein the processor is a digital signal processor to process audio signals in accordance with the application specific code and common processing code.

6. The system of claim 1 wherein each ASM module comprises code to decode audio compression formats.

7. The system of claim 6 wherein the audio compression formats are selected from the group comprising: audio compression – 3 (AC3), Windows Media Audio® (WMA), Windows® Wave (WAV), digital theater sound (DTS), high definition compatible digital (HDCD), moving picture experts group layer – 3 audio (MP3), pulse code modulation (PCM), advanced audio coding (AAC), portable networks graphics (PNG), Dolby Digital-EX, Digital Theater Surround-ES, Digital Theater Surround 96/24, WMA-Pro, MP3-Pro, and meridian loss-less packing (MLP).

8. The system of claim 1 wherein each common processing module performs an operation selected from the group comprising: audio management, bass management, tone control, equalization, dynamic range compression, sample rate conversion, matrix decoding, virtualization, and surround sound management.

9. The system of claim 1 wherein the processor readable medium is system memory, the system further comprising code to:

load only common processing modules used for on-demand signal processing.

10. The system of claim 9 wherein only one matrix decoder or one virtualizer is included in the common processing modules used for on-demand signal processing.

11. The system of claim 1 wherein the audio-video signal processing system is a digital video disc processing system.

12. A method of processing data using a processor and software architecture partitioned between application specific modules (ASMs) and common processing modules (CPMs), the method comprising:

receiving input data;

requesting one of the ASMs to perform an application specific operation on the input data;

performing the application specific operation using the requested ASM;

requesting one of the CPMs to perform a common processing operation, wherein each of the CPMs is compatible with a plurality of the ASMs; and

performing the common processing operation using the requested CPM.

13. The method of claim 12 further comprising:

loading into system memory only common processing modules used for on-demand signal processing.

14. The method of claim 13 wherein only one matrix decoder or one virtualizer is loaded into system memory for on-demand processing.

15. The method of claim 12 wherein the input data includes a digital audio signal and requesting one of the ASMs to perform an operation comprises requesting one of the ASMs to decode the digital audio signal.

16. The method of claim 15 wherein the ASMs comprise code to decode audio compression formats.

17. The method of claim 16 wherein the audio compression formats are selected from the group comprising: audio compression – 3 (AC3), Windows Media Audio® (WMA), Windows® Wave (WAV), digital theater sound (DTS), high definition compatible digital (HDCD), moving picture experts group layer – 3 audio (MP3), pulse code modulation (PCM), advanced audio coding (AAC), portable networks graphics (PNG), Dolby Digital-EX, Digital Theater Surround-ES, Digital Theater Surround 96/24, WMA-Pro, MP3-Pro, and meridian loss-less packing (MLP).

18. The method of claim 12 wherein the input data includes a digital audio signal and the common operation is selected from the group comprising: audio management, bass management, tone control, equalization, dynamic range compression, sample rate conversion, and surround sound management.

19. The method of claim 12 wherein requesting one of the ASMs to perform an operation on the input data comprises:

writing a command word in a data buffer specifying parameters of the request;

reading the command word in the data buffer with a digital signal processor; and

updating a manager associated with the requested ASM with at least a subset of the parameters.

20. The method of 18 wherein the data buffer is a first-in-first-out buffer having sufficient size to allow reading processes and writing processes to perform at respective paces.

21. The method of claim 12 wherein the processor comprises a digital signal processor in a digital versatile disk system and the input data comprises digital audio data.

22. An audio/visual system having a software architecture partitioned between application specific modules (ASMs) and common processing modules (CPMs), the system comprising:

means for receiving input data;

means for requesting one of the ASMs to perform an application specific operation on the input data;

means for performing the application specific operation using the requested ASM;

means for requesting one of the CPMs to perform a common processing operation, wherein the CPMs are compatible with a plurality of ASMs; and

means for performing the common operation using the requested.

23. A method of developing a segmented software architecture for an audio/video system, the method comprising:

partitioning software into application specific code and common processing code to cause one or more audio/video processors of the audio/video system to perform predetermined operations, wherein partitioning the software comprises:

generating a plurality of application specific modules, wherein each application specific module consolidates unique code used for at least one of the processor operations; and

generating common processing modules that are compatible with a plurality of application specific modules for performing operations in conjunction with a plurality of application specific modules.

24. The method of claim 23 wherein the one or more audio processors comprise a digital signal processor and a communication processor responsible for communications between the digital signal processor and peripheral components of the audio/visual system, the method further comprising:

associating a manager with each application specific module and each common processing module to store data accessible to the digital signal processor and the communication processor.

25. The method of claim 24 further comprising:

developing code to create a copy of the managers local to the digital signal processor during operation of the audio/video system.

26. The method of claim 23 wherein the application specific modules comprise audio decoders and the common processing code comprises audio post-processing code.

27. A computer program product having code encoded therein to direct a processor to process a signal, the code comprising:

application specific code comprising a plurality of application specific modules, wherein each application specific module includes code to cause the processor to perform at least one application specific operation; and

common processing code comprising a plurality of common processing modules, wherein each common processing module includes code to cause the processor to perform at least one common processing operation and each common processing module is compatible with a plurality of application specific modules.

28. The computer program product of claim 27 wherein the computer readable medium is selected from a the set of a disk, tape or other magnetic, optical, or electronic storage medium and a network, wireline, wireless or other communications medium.

29. The computer program product of claim 27 wherein the code further comprises a manager associated with each application specific module and each common processing module to store data accessible to the processor.

30. The computer program product of claim 27 wherein the application specific code comprises code to decode audio compression formats.

31. The computer program product of claim of claim 30wherein the audio compression formats are selected from the group comprising: audio compression – 3 (AC3), Windows Media Audio® (WMA), Windows® Wave (WAV), digital theater sound (DTS), high definition compatible digital (HDCD), moving picture experts group layer – 3 audio (MP3), pulse code modulation (PCM), advanced audio coding (AAC), portable networks graphics (PNG), Dolby Digital-EX, Digital Theater Surround-ES, Digital Theater Surround 96/24, WMA-Pro, MP3-Pro, and meridian loss-less packing (MLP).